| In | dex of | Claims |  |
|----|--------|--------|--|
|    |        |        |  |

| Application/Control No. | Applicant(s)/Patent under Reexamination |
|-------------------------|---|
| 09/175,156              | PUTNAM ET AL.                           |
| Examiner                | Art Unit                                |
| Joseph T. Phan          | 2614                                    |

| <b>√</b> | Rejected | _ | (Through numeral)<br>Cancelled |
|----------|----------|---|--------------------------------|
| =        | Allowed  | ÷ | Restricted                     |

| N | Non-Elected  |
|---|--------------|
| - | Interference |

| Α | Appeal   |
|---|----------|
| 0 | Objected |

|          |          |  |  |              |  |          | •        |                    | _  |          |     |       |          |          |   |   |          | ,  |  |          | _ |
|----------|----------|--|--|--------------|--|----------|----------|--------------------|--|----------|-----|-------|----------|----------|---|---|----------|--|--|----------|---|
| Cla      | aim      |  | _  |              | [  | Date     |          |                    |  |          |     | Cla   | im       |          | - |   |          | Date   | •<br>•   |          |   |
| Final    | Original |  |  |              |  |          |          |                    |  |          |     | Final | Original |          |   |   |          |  |  |          |   |
|          | 1        | J  |  |              | _  |          |          | T                  | $\vdash$   | П        | . [ |       | 51       | 一        |   |   |          |  |  |          | T |
|          | 2        | J  |  |              |  |          |          |                    |  |          |     |       | 52       | $\neg$   |   |   |          |  | _  |          | Г |
|          | 3        | ブ  |  | _            | <del>                                     </del> | $\vdash$ |          |                    |  |          |     |       | 53       | _        |   |   |          |  |  |          | Γ |
|          | 4        | 1  |  |              |  |          |          |                    |  |          |     |       | 54       |          |   |   |          |  |  |          | Γ |
|          | 5        | 1  |  |              |  |          | <u> </u> | T                  |  |          |     |       | 55       | $\neg$   |   |   |          |  | · ·  |          | Г |
|          | 6        | 0  |  |              |  |          |          |                    |  |          |     |       | 56       | $\neg$   |   |   |          |  |  |          |   |
|          | 7        | U  |  |              |  |          |          |                    |  |          |     |       | 57       |          |   |   |          |  |  |          | Г |
|          | 8        | 1  |  |              |  |          |          |                    |  |          |     |       | 58       |          |   |   |          |  |  |          |   |
|          | 9        | П  |  |              |  |          |          |                    |  |          |     |       | 59       |          |   |   |          |  |  |          |   |
|          | 10       |  |  |              |  |          |          | <u>L</u> .         | L  |          | i   |       | 60       |          |   |   |          |  |  | _        | L |
|          | 11       | $\perp$  |  |              |  |          |          | L                  |  |          |     | i     | 61       |          |   |   |          |  |  | L        | L |
|          | 12       | Щ  |  |              | ļ  |          |          | <u> </u>           | 匚  |          |     |       | 62       |          | _ |   |          |  |  | _        | L |
|          | 13       | Щ  | _  | _            | _  |          |          | ļ                  | <u> </u>   |          |     |       | 63       | _        |   |   |          | L_   |  |          | L |
|          | 14       | Ш  |  |              |  | <u> </u> | _        |                    |  |          | . : |       | 64       | $\perp$  |   |   |          |  | _  |          | L |
|          | 15       | Щ  |  |              | _  | <u> </u> |          | <u> </u>           | <u> </u>   | _        |     |       | 65       |          |   |   |          |  | <u> </u>   | ļ        | L |
| <u> </u> | 16       | Ш.   |  |              |  | ļ        | _        | <u> </u>           |  |          |     |       | 66       |          |   |   |          | L  | L  | <u> </u> | L |
| <u> </u> | 17       | Ц.   | L.   | _            | _  | _        | _        | <u> </u>           | L  |          |     |       | 67       | _        | _ |   |          | _  |  |          | L |
| <u> </u> | 18       | Щ.   |  |              | <u> </u>   | _        | ļ.,      | <u> </u>           | _  |          |     |       | 68       | _        | _ |   | _        | _  | _  | L        | L |
|          | 19       | Ц  |  | <u> </u>     | <u> </u>   | <u> </u> | <u> </u> | <u> </u>           | <u> </u>   | _        |     |       | 69       |          |   |   |          |  | _  | <u> </u> | ╀ |
| ļ        | 20       | Ш  |  | <u> </u>     | <u> </u>   | _        | _        | ╙                  | _  |          |     |       | 70       |          |   |   |          |  |  | L.       | L |
| ļ        | 21       | Ш  |  | _            | ـــــ  | _        | _        | ┡                  | L  | _        |     |       | 71       | $\perp$  |   |   |          | _  | _  | ╙        | ╄ |
|          | 22       | ₽  |  |              | ļ  |          | -        | _                  | ┡  | <u> </u> |     |       | 72       |          |   |   |          | -  |  | <u> </u> | ╀ |
|          | 23       | 1  | L  | <u> </u>     | ▙  |          |          | ┡                  | <b>!</b>   | L        | i   |       | 73       |          |   |   |          | _  |  | ⊢        | ╀ |
|          | 24       | Н  | <u> </u>   | <u> </u>     | <u> </u>   | _        | _        | ┝                  | ├  | <u> </u> |     |       | 74       |          |   |   |          |  |  | <u> </u> | ╀ |
|          | 25       |  | <del> </del>                                     | -            | <del> </del>                                     | <u> </u> |          | ├                  | ┢  | ├-       |     |       | 75<br>76 | $\vdash$ |   |   | _        | <u> </u>   | ·  |          | ⊦ |
| -        | 26       | 1  | -  | -            | ┢  | ┝        | ├—       | ├                  | -  | ┢        |     |       | 77       | $\vdash$ |   |   | _        |  | ├  | ├        | ╀ |
| -        | 27       | 1  | $\vdash$   | $\vdash$     | ⊬  | ⊢        | -        | ├                  | ├  | ⊢        |     |       | 78       | $\dashv$ |   |   | -        | $\vdash$   |  | ⊢        | ╀ |
| $\vdash$ | 28<br>29 | ├  | -  | ├            | ├  | -        | ├        | ┢╌                 | -  | ├        |     |       | 79       | -        |   |   |          | ├  | -  | ├        | ╁ |
| -        | 30       | -  | -  | ├            | ├  | ├        | ├        | ┢                  | -  |          | i   |       | 80       |          |   |   | <u> </u> | ├  | -  | ├        | ╁ |
|          | 31       | -  |  | -            | ├  | -        | ├        | ┝                  | -  | ├        |     | -     | 81       | $\dashv$ | _ |   | -        | ┢  | ├  | ├        | ╁ |
| -        | 32       | ╁  | $\vdash$   | -            | ├  | ⊢        | ├        | ┢                  | ┢  | ╁        |     | ·     | 82       | $\dashv$ |   |   |          | $\vdash$   |  | $\vdash$ | ╁ |
|          | 33       |  | ├  | ├─           |  | ├        | ┢        | -                  | ┢  | ├─       |     |       | 83       | H        |   |   | ┢        | <del> </del>                                     | <u> </u>   | ╁        | ╁ |
|          | 34       |  | -  | ⊢            | ╁  | ├        | ├        |                    | ┢  | ┢        |     |       | 84       |          | _ | _ | $\vdash$ | $\vdash$   | ├  | ╁─       | t |
| -        | 35       | -  | -  | <del> </del> | ┢  | ┢        | -        | -                  | ┢  | ╁╌       |     |       | 85       |          |   |   | $\vdash$ |  |  | ╁        | t |
| -        | 36       | †  | $\vdash$   | ┢            | $\vdash$   | $\vdash$ | $t^-$    | 1-                 | ┢  | $\vdash$ |     |       | 86       | $\dashv$ |   |   | $\vdash$ |  | $\vdash$   | $\vdash$ | t |
| 1        | 37       | <del>                                     </del> | <del>                                     </del> | ┪            | 1  | T        | $\vdash$ | $t^{-}$            | <del>                                     </del> | $\vdash$ | 1   |       | 87       | $\vdash$ |   |   |          |  |  | $\vdash$ | t |
|          | 38       | T  |  | $\vdash$     | $\vdash$   |          | $\vdash$ | t                  | $\vdash$   | $\vdash$ | 1   |       | 88       | -        | _ | _ | -        | <del>                                     </del> | <del>                                     </del> | $\vdash$ | t |
|          | 39       | T  | Н  |              | t  | H        | H        | T                  | t  |          |     |       | 89       | H        | _ |   |          | T  | 1  | T        | t |
|          | 40       | T  |  |              | T  |          | Т        | 1                  | $\vdash$   |          | ĺ   |       | 90       | H        | - |   |          | П  |  | Г        | t |
|          | 41       | T  |  | Г            | T  | I        | T        | T                  |  |          | ĺ   |       | 91       |          |   |   |          | T  | Г  | Т        | T |
|          | 42       | 1  |  |              |  | Ī        | $\vdash$ | 1                  | Г  |          | ĺ   |       | 92       |          |   |   | Г        |  |  | П        | T |
|          | 43       |  |  | Γ            | Γ  |          |          | П                  | 1  |          | j   |       | 93       | П        |   |   |          |  | Γ  |          | Γ |
|          | 44       | Π  | П  | Γ            |  | Г        | П        |                    |  |          | 1   |       | 94       |          |   |   |          |  |  |          | Γ |
|          | 45       |  |  |              |  |          |          | Ī.,                |  |          | ]   |       | 95       |          |   |   |          |  |  |          | Γ |
|          | 46       |  |  |              |  |          | L        |                    |  |          |     |       | 96       |          |   |   |          | $L^-$  |  |          | Γ |
|          | 47       |  |  |              |  | 匚        |          | 匚                  |  |          |     |       | 97       |          |   |   |          |  |  |          | Ĺ |
|          | 48       |  |  |              |  | 匚        |          | 匚                  |  |          |     |       | 98       |          |   |   |          |  |  | 匚        | Ĺ |
|          | 49       | $\Box$   | 匚  |              |  | 匚        |          | $oxedsymbol{oxed}$ | $\Box$   | 匚        |     |       | 99       |          |   |   |          |  |  |          | Ĺ |
|          | 50       |  |  |              |  |          |          | 1.                 |  |          |     | L     | 100      |          |   |   |          |  |  |          | Ĺ |
|          |          |  |  |              |  |          |          |                    |  |          |     |       |          |          |   |   |          |  |  |          |   |

| Cla      | im   | Date         |          |          |  |                |          |                    |  |                                   |
|----------|--|--------------|----------|----------|--|----------------|----------|--------------------|--|-----------------------------------|
| آ        |  |              |          |          |  |                |          |                    |  | _                                 |
| Final    | Original                                     |              |          |          |  |                |          |                    |  |                                   |
| ΙĒ       | Orić   |              |          |          |  |                |          |                    |  |                                   |
| -        |  |              | _        |          |  |                |          |                    |  |                                   |
|          | 51<br>52                                     | -            |          |          |  |                |          |                    |  |                                   |
|          | 53   |              |          |          |  |                |          |                    |  |                                   |
| -        | 54   |              | _        | _        |  |                |          |                    |  |                                   |
| $\vdash$ | 54<br>55                                     | $\neg$       |          |          |  |                |          | -                  |  |                                   |
|          | 56   |              |          |          | $\vdash$   | _              | _        |                    | _  | -                                 |
|          | 57   |              |          |          | $\overline{}$                                    | _              |          |                    |  |                                   |
|          | 57<br>58                                     |              |          |          |  |                |          |                    |  | _                                 |
|          | 59   | _            | -        |          |  |                |          |                    |  |                                   |
|          | 60   |              | _        |          |  |                |          |                    |  |                                   |
|          | 61   |              |          |          |  |                |          |                    |  |                                   |
|          | 62   |              |          |          |  |                |          |                    |  |                                   |
|          | 63   |              |          |          |  |                |          |                    |  |                                   |
|          | 64   |              |          |          |  |                |          |                    |  |                                   |
|          | 63<br>64<br>65                               |              |          |          |  |                |          |                    |  |                                   |
|          | 66   |              |          |          |  |                |          |                    |  |                                   |
|          | 67   |              |          |          |  |                |          |                    |  |                                   |
| <u></u>  | 68   |              |          |          |  |                |          |                    |  |                                   |
|          | 69   | Ш            | L        | Ш        | $oxed{oxed}$                                     | L              |          | L                  | <u> </u>   |                                   |
|          | 70   | <u> </u>     | <u> </u> |          | _  |                | <u> </u> | L.:                | L  | _                                 |
| <u></u>  | 71   |              | _        |          |  |                | _        | <u> </u>           |  | <u> </u>                          |
| <u> </u> | 72   | ļ            |          | _        | <u> </u>   |                |          |                    |  | _                                 |
| <u> </u> | /3   | <u> </u>     |          | -        | -  | _              | <u> </u> | _                  |  | _                                 |
| ļ        | 70<br>71<br>72<br>73<br>74<br>75<br>76<br>77 | <b> </b>     | <u> </u> | _        |  | -              | <u> </u> | <u> </u>           | <u> </u>   |                                   |
|          | 75   | $\vdash$     | $\vdash$ | $\vdash$ | <u> </u>   | <u> </u>       | <u> </u> | <u> </u>           | -  | $\vdash$                          |
|          | 77   | $\vdash$     | <u> </u> | $\vdash$ | $\vdash$   | ⊢              | -        | -                  | ├  | -                                 |
|          | 78   | $\vdash$     | -        | $\vdash$ | $\vdash$   |                | $\vdash$ | $\vdash$           | -  | -                                 |
| <b>—</b> | 79   | H            | <u> </u> |          | <del> </del>                                     |                | $\vdash$ | <del> </del>       | <del>                                     </del> | $\vdash$                          |
|          | 80   |              |          | -        | <del>                                     </del> | <del> </del>   | -        | -                  | <del>                                     </del> | $\vdash$                          |
|          | 80<br>81                                     | H            | $\vdash$ | $\vdash$ | <del>                                     </del> | $\vdash$       |          |                    | $\vdash$   | Н                                 |
| <u> </u> | 82   |              | Ι        |          |  |                |          | $\vdash$           | $\vdash$   | -                                 |
|          | 82<br>83                                     |              |          |          |  | I              | $\vdash$ | $\vdash$           | <del> </del>                                     | $\vdash$                          |
|          | 84   |              |          |          |  |                | _        | $\vdash$           |  |                                   |
|          | 85   |              |          |          |  |                |          |                    | $\Box$   |                                   |
|          | 86   |              |          |          |  |                |          |                    |  |                                   |
|          | 87   |              |          |          |  |                |          |                    |  |                                   |
|          | 88   |              |          |          |  |                |          |                    |  |                                   |
|          | 89   |              | Ĺ        |          |  |                |          |                    |  |                                   |
|          | 90   |              | _        | <u> </u> | <u> </u>   | L              | L        | $oxedsymbol{oxed}$ |  | L                                 |
|          | 91   | L.           | <u> </u> | <u> </u> | _  |                |          |                    |  | L                                 |
| <u></u>  | 92   | Ŀ            | <u> </u> | <u> </u> | Щ  | <u> </u>       | <u> </u> |                    | <u> </u>   | _                                 |
|          | 93   | <u> </u>     |          | <u> </u> | _  | <u> </u>       | <u> </u> | <u> </u>           | $\vdash$   | <u> </u>                          |
| <u> </u> | 94   | $oxed{oxed}$ | <u> </u> | <u> </u> | <u> </u>   | <u> </u>       | <u> </u> | <u> </u>           | _  | _                                 |
| <u></u>  | 95   | <u> </u>     | <u> </u> | <u> </u> |  | <u> </u>       | ļ        | <u> </u>           | -  | $oxed{oldsymbol{oldsymbol{eta}}}$ |
|          | 96   | <u> </u>     | <u> </u> | $\vdash$ | _  | <del> </del>   | $\vdash$ |                    | <u> </u>   | <u> </u>                          |
| <u></u>  | 97   | <u> </u>     | $\vdash$ | -        | _  | ├-             | <u> </u> | <u> </u>           | $\vdash$   | $\vdash$                          |
|          | 98<br>99                                     | <u> </u>     | ⊢        | ⊢        | <u> </u>   | <del>  -</del> | <u> </u> | ⊢                  | ⊢  | ├                                 |
|          | 100  | $\vdash$     | $\vdash$ | $\vdash$ | ⊢-   | ├              | $\vdash$ | $\vdash$           | $\vdash$   | <del> </del>                      |

| Cla  | aim                                    | Date   |  |  |  |          |          |  |          |                 |
|--|--|--|--|--|--|----------|----------|--|----------|-----------------|
|  |  | $\neg$   |  |  |  |          |          |  |          | $\neg$          |
| Final  | Original                               |  |  |  |  |          |          |  |          |                 |
|  | 101                                    |  |  |  |  |          |          |  |          |                 |
|  | 102                                    |  |  |  |  |          |          |  |          |                 |
|  | 101<br>102<br>103                      |  |  |  |  |          |          |  |          |                 |
|  | 104                                    |  |  |  |  |          |          |  |          |                 |
|  | 105<br>106                             |  |  |  |  |          |          |  |          |                 |
|  | 106                                    |  |  |  |  |          |          |  |          |                 |
|  | 107                                    |  |  |  |  |          |          |  |          | _               |
|  | 108<br>109                             |  |  |  |  |          |          |  |          | _               |
|  | 109                                    |  |  |  |  |          |          |  |          |                 |
|  | 110                                    |  |  |  |  |          | _        |  |          | $\dashv$        |
|  | 111                                    |  |  | $\vdash$   | _  | -        | -        |  |          | $\dashv$        |
|  | 112                                    |  |  |  | _  | -        | _        |  |          | $\dashv$        |
|  | 113<br>114<br>115                      | -  |  |  | -  | H        |          |  |          | $\dashv$        |
|  | 115                                    | $\vdash$   | -  | -  | H  | H        | H        | H  | H        | -               |
|  | 116                                    | -  | _  | -  | Н  |          |          | $\vdash$   | $\vdash$ | $\dashv$        |
|  | 117                                    |  |  |  |  |          |          |  |          |                 |
|  | 118                                    |  |  |  |  |          | _        |  |          |                 |
|  | 119                                    |  |  |  |  | $\vdash$ |          |  |          |                 |
|  | 120                                    |  |  |  |  |          |          |  |          |                 |
|  | 120<br>121                             |  |  |  |  |          |          |  |          |                 |
|  | 122                                    |  |  |  |  |          |          |  |          |                 |
|  | 123                                    |  |  |  |  | <u> </u> | L_       |  |          | Ш               |
|  | 122<br>123<br>124<br>125<br>126<br>127 |  |  |  |  |          |          | <u>_</u>   |          |                 |
|  | 125                                    | _  | <u> </u>   | _  | <u> </u>   | _        | <u> </u> |  |          | -               |
|  | 126                                    |  | <u> </u>   |  | <u> </u>   | _        | _        | <u> </u>   |          |                 |
|  | 127                                    | _  | <u> </u>   |  |  | -        | _        | l—   | ⊢        |                 |
|  | 128<br>129                             | -  | ├  |  | ┝  | -        |          | <del> </del>                                     | ┝        | $\dashv$        |
|  | 130                                    | -  | -  | -  |  | -        |          | ├—   | $\vdash$ | $\vdash$        |
|  | 130<br>131                             | -  | -  |  | $\vdash$   | $\vdash$ | -        | -  | -        |                 |
|  | 132                                    | ┢  | _  | _  |  | $\vdash$ |          | $\vdash$   | _        |                 |
|  | 133                                    | $\vdash$   | _  | <del>                                     </del> | -  | Н        | Н        |  |          |                 |
|  | 133<br>134                             |  |  |  |  |          | Т        | <u> </u>   |          | П               |
|  | 135                                    |  |  |  |  |          |          |  |          |                 |
|  | 136<br>137                             |  |  |  |  |          |          |  |          |                 |
|  | 137                                    |  |  |  |  |          |          |  |          |                 |
|  | 138                                    |  | L  | L  |  | _        |          |  |          | Щ               |
|  | 139                                    | _  | _  | _  | _  |          | _        | <u> </u>   | <u> </u> | Щ               |
|  | 140                                    | _  | <u> </u>   | _  | _  | L        | <u> </u> | <u> </u>   | <u> </u> | Щ               |
| <u> </u>   | 141                                    | ┞  | <u> </u>   | <u> </u>   | -  | <u> </u> | ⊢        | <u> </u>   | <u> </u> | $\vdash \vdash$ |
| <u> </u>   | 142                                    | _  | -  | -  | $\vdash$   | ├-       | -        | $\vdash$   | $\vdash$ | $\vdash$        |
|  | 143                                    | -  | -  | -  | $\vdash$   | $\vdash$ | -        | -  | ├-       | $\vdash$        |
| <u> </u>   | 145                                    | $\vdash$   | $\vdash$   | ⊢  | -  | ├        | -        | $\vdash$   | ⊢        | Н               |
| <del> </del>                                     | 145                                    | $\vdash$   | $\vdash$   | $\vdash$   | -  | $\vdash$ | $\vdash$ | 一  | ╁        | $\vdash$        |
| <del>                                     </del> | 147                                    | $\vdash$   | $\vdash$   | $\vdash$   |  | 1        | $\vdash$ | $\vdash$   | $\vdash$ | $\vdash$        |
|  | 148                                    |  | H  | -  | <del>                                     </del> | $\vdash$ | $\vdash$ | $\vdash$   |          |                 |
|  | 149                                    | <del>                                     </del> | <del>                                     </del> | $\vdash$   | $\vdash$   | $\vdash$ | H        | <del>                                     </del> | $\vdash$ | $\vdash$        |
|  | 150                                    | T  |  |  |  |          | $\vdash$ |  | $\vdash$ |                 |
|  |  | •  | _  |  |  |          | •        |  |          |                 |